

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-31 (Canceled).

Claim 32 (Currently Amended): A surface treatment apparatus comprising:

a plasma generation section adapted for generating plasma from a plasma generating gas;

a treatment vessel connected to the plasma generation section and including a susceptor ~~on which~~ adapted for placement of a subject to be treated is placed thereon;

a cooling device adapted for cooling the subject placed on the susceptor ~~to a predetermined temperature~~;

a supply section adapted for adding a reactive gas to an activated plasma generating gas activated by the plasma generation section and caused to flow toward the subject cooled by the cooling device[[,]];

~~wherein an activated reactive gas is generated by adding the reactive gas to the activated plasma generating gas, and the activated reactive gas is reacted with a surface layer of the subject cooled by the cooling device; and~~

a heating device adapted for heating a product produced by a reaction between the activated reactive gas and the surface layer of the subject, and

~~wherein the product is removed from the subject by heating the product by the heating device~~

a separating device adapted for separating the substrate from the susceptor prior to heating the product.

Claim 33 (Previously Presented): The surface treatment apparatus according to claim 32, which is an apparatus for removing a native oxide film from a surface of the subject to be treated.

Claim 34 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the cooling device is adapted for reaching a predetermined temperature at which ~~the subject placed on the susceptor is cooled,~~ is of not higher than room temperature.

Claim 35 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the cooling device is adapted for reaching a predetermined temperature at which ~~the subject placed on the susceptor is cooled,~~ which ranges from 20°C to -20°C.

Claim 36 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the cooling device is adapted for reaching a predetermined temperature at which ~~the subject placed on the susceptor is cooled,~~ which ranges from 10°C to -20°C.

Claim 37 (Canceled).

Claim 38 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the heating device is adapted for reaching a heating temperature is of not lower than 100°C.

Claim 39 (Previously Presented): The surface treatment apparatus according to claim 32, wherein the heating device is heat radiation means provided above the subject to be treated.

Claim 40 (Previously Presented): The surface treatment apparatus according to claim 32, wherein the heating device is a heating lamp provided above the subject to be treated.

Claim 41 (Currently Amended): The surface treatment apparatus according to claim 32, ~~further comprising~~ wherein the separating device is a lifting device for lifting the subject to be treated, to move the subject away from the susceptor when heating the product with the heating device.

Claim 42 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the ~~reactive-gas~~ supply section includes a number of gas exhaust holes formed in an inner wall of the treatment vessel.

Claim 43 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the ~~reactive-gas~~ supply section includes a shower head having a number of gas exhaust holes provided in the treatment vessel.

Claim 44 (Currently Amended): The surface treatment apparatus according to claim 32, wherein the ~~reactive-gas~~ supply section ~~supplies~~ is adapted for supplying the reactive gas to the ~~activate-gas-species~~ activated plasma generating gas in position at least 20 cm away from an end of the plasma generation section in a direction of the subject to be treated.

Claim 45 (Currently Amended): The surface treatment apparatus according to claim 33, wherein the plasma generating section is adapted for generating plasma from a plasma

generating gas which contains an H₂ gas and the supply section is adapted for supplying a
reactive gas which contains a fluorine-containing gas.

Claim 46 (Previously Presented): The surface treatment apparatus according to claim
45, wherein the fluorine-containing gas is an NF₃ gas.

Claim 47 (Previously Presented): The surface treatment apparatus according to claim
45, wherein the plasma generating gas contains an N₂ gas.

Claim 48 (Previously Presented): A cluster system comprising:
the surface treatment apparatus according to claim 33;
a carrier chamber in which a carrier robot for carrying the subject is provided
connected to the treatment vessel of the surface treatment apparatus;
and a metal-wiring forming chamber connected to the transfer chamber,
wherein the cluster system is capable of carrying the subject in an unreactive
atmosphere such that a native oxide film can be prevented from being regenerated
while the subject is being carried in the atmosphere.

Claim 49 (Previously Presented): A cluster system according to claim 48, further
comprising:
a load lock chamber connected to the carrier chamber,
a heating chamber, connected to the carrier chamber, for pre-heating the subject to be
treated; and
a cooling chamber connected to the carrier chamber.

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Claim 50 (Currently Amended): The surface treatment apparatus according to claim 48, wherein the metal-wiring forming chamber is a chamber adapted for forming a film of at least one of Al, Ti, TiN, Si, W, WN, Cu, Ta, TaN and SiN.

Claim 51 (Previously Presented): The surface treatment apparatus according to claim 48, wherein the metal-wiring forming chamber includes means for heating the subject to a temperature of 100°C or higher.

DISCUSSION OF THE AMENDMENT

The Abstract of the Disclosure has been amended to be in narrative form, limited to a single paragraph, and to contain less than 150 words.

Claim 32 has been amended by adding a separation device limitation, as supported in the specification at page 38, line 19ff which, at least by implication, establishes possession of the invention as claimed as of the filing date. In addition, intended use language has been deleted and --adapted for-- various intended uses, where applicable, added. Finally, the dependent claims have been amended to be consistent with Claim 32.

No new matter is believed to have been added by the above amendment. Claims 32-36 and 38-51 remain pending in the application.